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BRITISH AFFAIRS

A QUARTERLY REVIEW

THE QUEEN'S SPEECH
NIGERIAN INDEPENDENCE IN 1960
AUTOMATION COMES TO BRITISH INDUSTRY
NUCLEAR POWER—THE LONGER TERM OUTLOOK

THE COLOMBO PLAN

ROLE OF PRIVATE INVESTMENT ABROAD
GOOD DESIGN IN BRITISH EXPORTS
INSTALMENT BUYING
BOOK REVIEWS

VOL. II, NO. 4—DECEMBER 1958

BRITISH INFORMATION SERVICES
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CONTENTS

Page
THE QUEEN'S SPEECH: THE ISSUES OF THE DAY 145
NUCLEAR POWER—THE LONGER TERM OUTLOOK....152
NIGERIAN INDEPENDENCE IN 1960 155
AUTOMATION COMES TO BRITISH INDUSTRY 157
GOOD DESIGN IN BRITISH EXPORTS 162
THE COLOMBO PLAN 164
THE SEATTLE CONFERENCE 172
ROLE OF PRIVATE INVESTMENT ABROAD 179
INSTALMENT BUYING 183
BOOK REVIEWS 186

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The Queen's Speech: The Issues of the Day

Each Autumn, at the opening of the annual session of Parliament, the Sovereign delivers in person a speech in which is outlined the legislative program of the Government of the day. The immediately following days are given over to a general debate of the issues raised.

Here are extracts from the Queen's Speech of October 28:

> "My Ministers are resolved to ensure the strength of sterling at home and abroad and a high and stable level of employment. In co-operation with the Commonwealth, they will seek to expand our oversea trade both in Europe, by the creation of a Free Trade Area, and throughout the world. . . .
>
> "Proposals will be laid before you for placing the National Insurance Scheme on a sound financial basis and enabling a larger section of My People to build up pension rights related to their earnings. Effect will be given to many of the recommendations of the Royal Commission on mental illness; and the provisions of a new Bill will replace the existing law on mental health in England and Wales. . . .
>
> "My Government will continue to encourage the extension of facilities for higher education in the universities and technical colleges. . . .
>
> "New legislation to maintain the provision of financial assistance for Colonial development and welfare will be laid before you. . . ."

THE ENSUING DEBATE

Commonwealth and Colonial affairs; the strength of sterling; expanding trade and education; these are fair samples of the issues to which Parliament will address itself in the coming months. Specific acts of legislation are also proposed in this "Speech from the Throne."

In the ensuing debate the rough and tumble of Parliamentary business is resumed. It soon emerges which are the questions of most pressing concern to Parliament. This year the economic issues were very much to the fore.

The first of these were the issues of domestic stability—the prospect of recession which Opposition speakers made much of, and the prospects on the other hand of a new era of stability and strength to which the Government looked forward. It fell to the Treasury Minister to outline

The Commonwealth Conference

The Commonwealth Trade and Economic Conference, held in Montreal from September 15 to 26, was called to discuss Commonwealth trade and economic affairs in the wider context of an expanding world trade.

The Report* is summarized below:

Trade: The Conference agreed that dollar discrimination should be progressively reduced and ended as soon as possible. Britain removed import restrictions on canned salmon, newsprint and most machinery. Britain also invited Colonial Governments to relax restrictions on a wide range of dollar imports and announced its intention all being well to make a start next year on the removal of all remaining restrictions.

Commodity Problems: The Conference recognized the serious problems caused by the prevalence of wide fluctuations in commodity prices and the need for remedial action. To this end, Commonwealth countries agreed to participate in a commodity by commodity examination of the situation.

Finance: The Conference recognized the vital role of sterling in financing the flow of world trade. It was essential to the stability and progress of the whole world trading community that sterling remain strong. It remained the agreed objective that sterling should be made convertible as soon as the necessary conditions had been achieved. Agreement was reached on the desirability of expanding the resources of the International Monetary Fund and the International Bank for Reconstruction and Development.

Development: The Conference stressed the great importance of more rapid economic progress in the less-developed countries. All countries undertook to cooperate in this urgent task.

Education: It was agreed in principle that a new scheme of annual awards of scholarships and fellowships would be established. Under this scheme, 1,000 Commonwealth scholars and fellows will be studying in other Commonwealth countries at any one time.

Telecommunications: All countries recognized the importance of reliable communications in strengthening the Commonwealth. It was agreed in principle to construct a Commonwealth coaxial cable which would provide the first round-the-world telephone service.

Consultation: The Conference acknowledged the value of existing arrangements for economic consultation and agreed to co-ordinate these under the name of Commonwealth Economic Consultative Council. Britain is to provide a Commonwealth House.

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*Cmnd. 539 Price 18 cents plus 5 cents mailing from BIS Sales Section.

the economic scene. This is how in recent speeches in and out of Parliament the Treasury view has been expressed.

BUILT-IN ACCELERATORS

An overall view of Britain's economy in the light of business cycle theories was given by the Chancellor of the Exchequer, Mr. Heathcoat Amory, in a speech before the Institute of Directors on October 30.

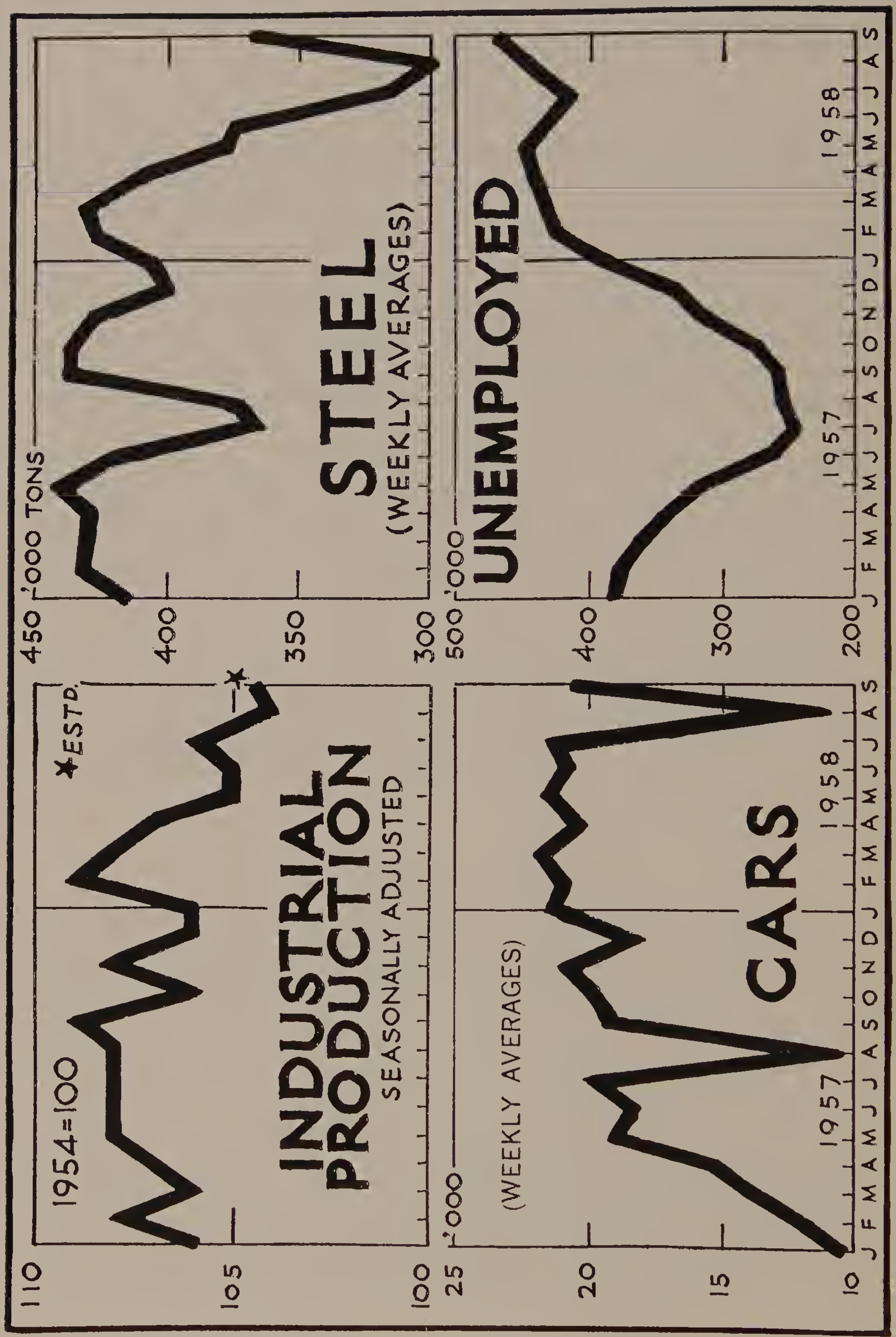
"When I took office as Chancellor last January the economy was undergoing a course of treatment. Today I can tell you our economy is sounder, stronger. I believe industry is more confident about the future; and it is right to be. The events of last year have been no more than a necessary, salutary pause in the long term expansionist trend. If there is still a "cycle" in business affairs it is very different from what it used to be. Alternatives then were boom and slump. Nowadays we are either expanding, or checking expansion to avoid inflation, and that's a very different story. We hear a lot nowadays—at least those of us who listen to economists—about built in stabilizers. It seems to me that the world also has a number of built in accelerators. There is a variety of buttons you can press—technological, psychological, political, economic—all of which speed up the motor.

"Modern technology for example has an impetus of its own. When man finally arrives on the moon it will not be because he thinks it is a nice place to go to but because he cannot stop the technological impetus that tempts him on. As scientists go on thinking out or hitting upon new ways of producing wealth and welfare there is bound to be an irresistible urge to employ and enjoy them.

UNDERDEVELOPED NATIONS

"Then there is psychology. Among the menaces of this century of unprecedented change and turmoil it is rather a heartening thought that men in many nations show signs of reacting by developing a more active and practical sense of cooperation. Underdeveloped nations are deeply and rightly concerned to raise their living standards. They want Western technology for all the benefits it can confer, and we in the West feel the urge, we want to help, to the limit of our capacity.

"Then there is the political impetus. Any student of our own political system knows that every government has a domestic interest in expansion—it is an exhilarating climate for politicians as well as for others. But nowadays there is also the additional interest in the international sphere. There is this much to be said about the cold war: so long as our contest with the Communist bloc is confined to the production of wealth it may


INDUSTRIAL PRODUCTION
SEASONALLY ADJUSTED
1954=100
★ESTD.
110
105
100
STEEL
(WEEKLY AVERAGES)
'000 TONS
450
400
350
300
CARS
(WEEKLY AVERAGES)
'000
25
20
15
10
UNEMPLOYED
'000
500
400
300
200
J F M A M J J A S O N D J F M A M J J A S
1957
1958

do some good. This competition is unending and we cannot contract out of it. We in the free world have the most powerful of political motives for maximizing our own industrial effort and no-one should discount the impact of that in the economic field.

"This is the perspective against which we must consider the pause of the last year or so. Up to last year the world trade in goods had nearly doubled in ten years—and we ourselves have done well—though we have not succeeded in maintaining our share. No wonder the pressure to invest, in new and better capacity, has been building up strongly in our industries. There was more investment in fixed assets by manufacturers last year than ever before—and an increase of three-quarters over 1948. What is perhaps more significant is that the actual addition to industry's stock of plant and machinery—as distinct from mere replacement—also went up by three-quarters over this period. . . .

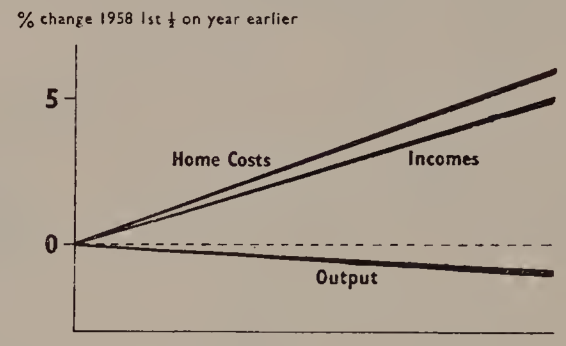
"So my main task when I came to the Treasury at the beginning of this year was clearly laid down: to continue the policy of winning world confidence in the pound. Higher bank rate, the stabilization of bank advances, measures to limit public investment, and a more critical attitude to Commonwealth investment were just beginning to take effect. And there was no doubt in my mind that for the moment these restrictions had to stay."

THE POSITION NOW

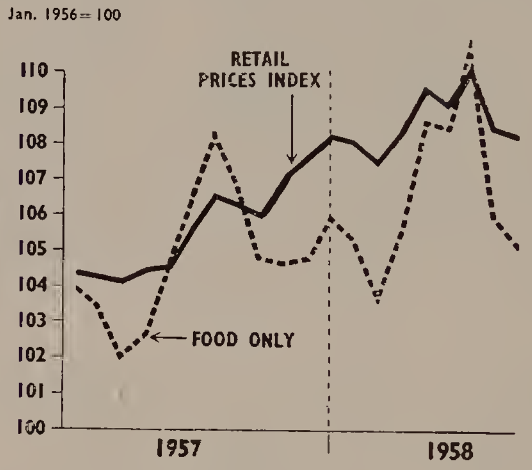
The Chancellor in replying to Opposition speeches on the Queen's Speech brought the economic picture up-to-date. Here are some of his points:

- *Unemployment* at "about 2.2 or 2.3 per cent is by any standards still a low figure and, relatively to most other industrial countries today, an excessively low figure."
- *Sterling* has made a "satisfactory recovery from the difficulties of a year ago."
- *Trade:* "We have done well on trade account and we have enjoyed a heartening return of confidence in the £."
- *Gold Reserves:* "Our reserves have gone up month by month, £450 million in the past year."
- *Sterling Balances:* "Over the past year, we have also been able to carry a substantial reduction in the sterling balances . . ."
- *Investment Abroad:* "Also, at the same time . . . to continue a very high rate of new investment, mainly in the Commonwealth."
- *Balance of Payments:* "In the first half of this year we earned a surplus on current account of £334 million. This was a larger surplus in six months than . . . in any twelve-month period since the war."

THE PROBLEM OF PRICES

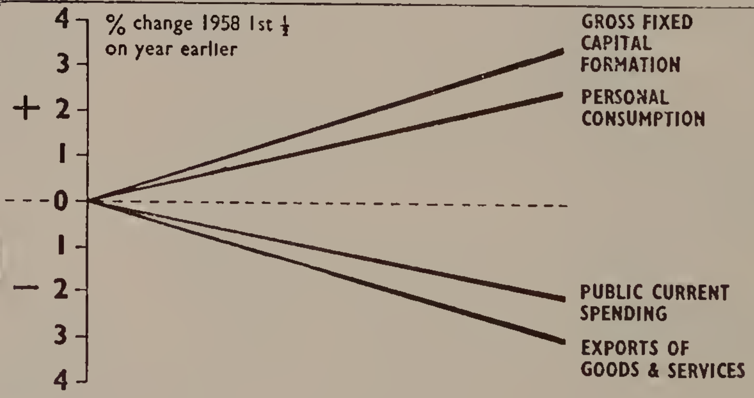


Incomes have grown while output fell so that home costs per unit of output have risen again.



Retail prices were rising up to June, but with food down from its peak they have fallen.

CHANGES IN DEMAND



UK BALANCE OF PAYMENTS
(£ mn.)

	1957		1958
	1st half	2nd half	1st half
Total imports (fob)	1807	1766	1616
Total exports (fob)	1782	1735	1753
"Visible" Trade Balance	—25	—31	+137
"Invisible" Trade Balance	+143	+185	+197
CURRENT BALANCE OF PAYMENTS	+118	+154	+334
This surplus was used in:			
Long term overseas investments	+178	+30	+114
Changes in reserves	+88	—38	+287
Changes in overseas sterling holdings	—64	+239	+13
Other financing items*	—84	—77	—80

*Mainly balancing item

RESUMPTION OF STEADY EXPANSION

"Taking the picture as a whole, therefore—record investment, record personal consumption, a strong £, strengthened reserves and more stability in the internal prices than we have had for years—surely it is absurd to talk about stagnation. The economy has been fortified almost at every point. It is with this knowledge that I can turn in confidence to the future.

"I begin with what the Government have done to stimulate the resumption of steady expansion. We have lifted the credit squeeze and we have allowed easier access to the capital markets. The Bank Rate has been reduced from 7 per cent to 4½ per cent.* We have raised the initial allowance by 50 per cent, and thus encouraged capital expenditure. We have abolished restrictions on hire-purchase and have taken measures to encourage development in areas of relatively heavier unemployment. We have raised the ceiling somewhat on public investment expenditure and have brought forward a substantial amount of work in this field, and by the increases in overseas loans and credits . . . we have taken effective action to sustain the demand for our exports."

STRONG ECONOMY

Concluding, the Chancellor said: "We have reason to feel fortified and encouraged by our recent progress and I believe that now, building on the foundations of a strong economy, we can hope to enjoy a measure of progress without losing stability, and move ahead with confidence in our aims and in ourselves."

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*Bank rate was reduced to 4 percent on Nov. 20.

Striking progress has been made in Britain's nuclear power program. By the 1970's nuclear reactors should be producing half of Britain's electricity.

Nuclear Power — The Longer Term Outlook

On October 17, two years ago, the world's first industrial-scale nuclear power plant at Calder Hall in Cumberland began supplying electric power to Britain's grid system. Since then it has provided some 750 million units of electricity, but such is the pace of nuclear progress that the plant, which produces both plutonium and electric power, had become out of date almost before it was completed.

A series of striking engineering improvements have now made it possible for reactors of the Calder Hall type—gas cooled, graphite-moderated and fuelled by natural uranium—to give much greater power. Instead of 92 MW, the first three nuclear plants being built for the United Kingdom electricity authorities will each have outputs of about 300 MW; the fourth, at Hinkley Point, in Somerset, an output of 500 MW, and the most recently planned plant, to be sited probably on the Suffolk coast, is to have an output of 650 MW, the largest of any nuclear plant in the world. (The 220 MW nuclear power plant being erected in Italy by the Nuclear Power Plant Co., is of the Calder Hall type, as is that proposed for Japan, which is the subject of current negotiation with some other United Kingdom consortia.)

LOWER CAPITAL COSTS

Technological advances in reactor design, such as the larger core size of the reactor which will enable the Hinkley Point plant to operate with three times the amount of uranium in use at Calder Hall, and the greatly strengthened pressure vessels and improved fuel elements, are reducing appreciably the capital costs of nuclear power plants relative to their electricity output. The Hinkley Point plant, to be completed in 1962, will have capital costs of about £120 per kilowatt (KW), including the cost of the reactor site. This compares with about £150 per KW for the first plants ordered by the electricity authorities, and a possible £100 to £110 per KW for later plants to be ready by 1965 and 1966 to complete the current nuclear energy program of 6,000 MW. Some of the latest plants may have electricity outputs of up to 800 MW. In fact, the cost of power from the 1962 plants is expected to be roughly equal to that from coal or oil-fired plants, providing that the nuclear plants can operate on an 80 per cent load factor, that is to say, as continuously as possible.

POST-1965 REACTORS

The UK Atomic Energy Authority believes that the graphite-moderated reactor, that is to say the Calder Hall design, offers scope for further development by means of the Advanced Gas Cooled Reactor. With this reactor much higher temperatures would be obtained leading to more economical electricity generation. To achieve such high temperatures, a new type of fuel element will be needed in place of natural uranium, probably using sintered uranium oxide; it would be sheathed in beryllium instead of magnesium which has been employed in the Calder Hall types. Work on the building of an AGC reactor has begun at Windscale, and this is expected to be ready by 1961. The experience gained from its operation will be applied to the building of nuclear power plants to be started after 1965. Sir John Cockcroft, Member for Scientific Research, UK Atomic Energy Authority, has forecast that this type of reactor may bring the costs of nuclear plants down to £80 per KW.

Looking further ahead, the Authority is at present studying several other reactor systems. For possible use in the '70s is the high-temperature gas-cooled reactor, which would use a mixture of graphite, uranium and thorium as a fuel element. This system which would be based on new principles, would first be tested in a high-temperature zero-energy system under construction at Winfrith Heath, and due to be in use by the summer of 1959, before embarking on a prototype reactor. Another line of approach under study is the heavy-water, gas-cooled reactor.

A long-term prospect is the fast breeder reactor at Dounreay, in Scotland, which is already completed and due to come into operation in the early part of 1959. This reactor will not only generate heat for conversion into power but is designed to produce more nuclear fuel than it consumes. By the 1970's it is hoped that work will be sufficiently advanced to go ahead with commercial power plants using the fast-breeder systems.

NUCLEAR PROPULSION FOR SHIPS

Investigation into the use of nuclear power for marine propulsion as an economic proposition is being carried out by government departments and private firms. Several systems are being studied, and probably the best prospects are offered by the Advanced Gas Cooled Reactor. At the Geneva 'Atoms for Peace' Exhibition, Vickers Nuclear Engineering displayed a model of such a system to propel a 65,000 ton tanker.

CONTROLLED THERMONUCLEAR REACTIONS

In the still more distant future lie the possibilities of controlled thermonuclear reactions giving the prospect of obtaining power from water by means of the fusion of deuterium nuclei. The research apparatus ZETA, at Harwell, is a first step towards this goal, and in it temperatures considerably higher than the 5 million degrees already achieved, are expected to be reached. Besides several other lines of development, a more powerful machine, ZETA II, is in preparation, and will eventually be operated at the UKAEA's new research establishment at Winfrith Heath. At least twenty years are thought to be required before the fusion process as a source of power becomes a practical possibility.

Appreciation From Nigeria

The following are excerpts from a speech by the Prime Minister of the Federation of Nigeria, Alhaji the Hon. Abubakar Tafawa Balewa, at the Nigerian Constitutional Conference which opened in London on September 29 and within a few weeks came to a most successful conclusion.

> "On an occasion such as this, . . . it is right first of all to express our gratitude to the British for all that they have done in the educational, administrative and the commercial fields. . . .
>
> "I should like to look a little beyond independence and to comment today on the sort of relationship which I hope will be established between an independent Nigeria and the United Kingdom. But first I think it will not be out of place to say how much we look forward to the right to acclaim Her Majesty as Queen of Nigeria. In truth we in Nigeria are second to none of her Majesty's subjects in our affectionate loyalty to her person, and in our admiration of the manner in which the Royal Family carry out their arduous duties throughout the Commonwealth. I can assure you that in Nigeria there is definitely no thought of, let alone wish for, a republic.
>
> "In 1960 the present relationship between Nigeria and the United Kingdom will be superseded by a partnership. We trust that Nigeria will be welcomed into the Commonwealth and that through the Commonwealth and the United Nations Nigeria will be able to make a positive contribution to the welfare of the human race."

Nigeria is on the last lap on the road to independence. She will become fully independent on October 1, 1960. It is for Nigeria to decide whether to remain in the Commonwealth.

Nigerian Independence in 1960

In the hazardous years of the post-war era, Britain's policy for her Colonial territories has not been easy to pursue. Always, the desire to grant independence as soon as possible has had to be balanced against Britain's plain duty to ensure that her Colonies were economically and politically stable before they took charge of their affairs.

The successful conclusion of the Nigerian Conference in London (Sept.-Oct.) possibly represents Britain's greatest triumph in the Colonial field since the end of the war. For here was a country of approximately 36 million people, Britain's largest Colonial territory, four times the size of Britain herself, with innumerable tribal groups and deep religious differences. In 60 years, from these incredibly diverse elements, Britain has brought a nation into being. As a result of the London Conference, the door is wide open for Nigeria to become fully independent on October 1, 1960.

RELIGIOUS AND TRIBAL DIFFERENCES

Only three years ago, few people would have thought it possible for the Nigerian leaders to compose their religious and tribal differences in so short a time. It can be said at once that the patience, resource and sympathy of the Secretary of State for the Colonies, Mr. Alan Lennox-Boyd, has had much to do with this signal triumph. His efforts have been immeasurably aided by the Governor-General, Sir James Robertson, and the Federal Prime Minister, Alhaji Abubakar Tafawa Balewa. And a great deal of credit goes to three Regional Premiers, Dr. Nnamdi Azikiwe, Chief Awolowo, and the Sardauna of Sokoto.

The chief obstacle to agreement in London was the difference of opinion between the Nigerian delegations as to the number of states which should comprise an independent Federation of Nigeria. At present there are the Eastern, Western and Northern Regions. The first two already have self-government, whilst the Northern Region will attain the same status in March. In some quarters it was felt that further states should be created, but the decision at the Conference was that the question should not be allowed to hold up the attainment of independence. Subsequently, it was agreed that there should be a special procedure after independence to decide the issue if the demand for new states was again raised.

In practice, everything will depend on the result of the Federal elections about a year from now. The new government will need to hold discussions with the British Government about the final arrangements for the transfer of power on independence. Clearly, if the new government is against the formation of new states, all should be plain sailing.

COOPERATION IN DEFENSE

There is great significance in the news that Britain and Nigeria will continue to cooperate in the field of defense. Throughout, the Nigerian leaders have shown a great awareness that independence entails great responsibilities. All three Premiers, and the Prime Minister, have made it plain that the closest links will be maintained with Britain. And all have reiterated their deep desire for investment from outside, and for technical aid. Of course, the new loan arrangements announced at the Commonwealth Montreal Conference will enable Britain to continue giving considerable assistance to Nigeria.

Like most dependent territories, Nigeria has a largely agricultural economy. Her principal exports are palm oil and kernels, tin, gold, cocoa, timber and groundnuts. But secondary manufacturing has expanded markedly in the past few years, and Nigeria will certainly wish this trend to continue unchecked. She is fortunate in having an excellent railroad system and a network of good roads. Furthermore she has great natural waterways in the Niger and Benue Rivers. Incidentally, the conference agreed to recommend the establishment of a Niger Delta Development Board to survey the area and draw up schemes of development.

INDEPENDENCE "PLUS"

The grant of independence to so large a country, with so considerable a population, cannot but have a most significant effect on Africa as a whole. (Nigeria's population represents nearly half the population of Britain's territories). Bearing this in mind, it is heartening to know that the Prime Minister of Nigeria and the Premiers have stated their desire that after independence their country should not only continue cooperating with Britain but should become a full member of the Commonwealth. Such membership represents "independence plus" and quite certainly is of immeasurable value to new states in the complicated world of today.

*Here are examples of how British industry is using automation to speed processes, cut costs, and plan future development.**

Automation Comes to British Industry

During the course of this year British industry will spend a total sum of between £100m. and £120m. on specialized equipment for the automation of production processes and of systems of handling data relating to the materials used and goods produced.

Estimates at present available indicate that during 1959 this expenditure can be expected to rise to more than £150m. Although large electronic computers or electronic brains, will play a considerable part in these developments, the major part of the expenditure involved will be on other types of equipment. These will include relatively small and simple computing and control devices (costing between £1,500 and £2,500 or even less), new forms of conveyor systems, automatically controlled foundry processes using novel founding techniques and new types of measuring equipment and magnetic memory devices.

There are three different aspects of automation:

1. The use of electronic computers to either control production or to analyse the results and help plan future developments.
2. The development of simple types of electrical memory and control units which will give instructions to very large individual production units within factories, and signify the fact that they have done so to a central control.
3. The use of new and more easily controllable processes and often materials in order to eliminate the need for individual control at each stage of production.

FULLY AUTOMATIC ROLLING MILL

Each of these aspects is now beginning to be put to practical use in British industry.

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*This article was written by the Scientific Correspondent of the *Financial Times* (London) and appeared in that journal on October 10, 1958. It is reproduced by permission.

Within the next few weeks, for example, it is expected that the completion and full operation of Britain's first fully automatic steel rolling mill will be announced. This is at Colvilles Dalzell works, near Glasgow. The system used has been developed by the Electronics Division of the English Electric Company. Previously it has proved extremely difficult to control rapidly and exactly the performance of the powerful electrical motors which drive the steel backwards and forwards through the rollers. The throwing of an electrical motor into reverse rapidly and bringing it quickly up to high speed again while moving the metal in the opposite direction for rerolling has presented many technical problems.

For this purpose, however, English Electric has developed a device called a mercury arc converter, which operates rather like an electronic valve. This is not only about a quarter of the size of previous devices of this type, but is also cheaper and more efficient in operation. Similarly, Elliott-Automation in collaboration with Samuel Fox is developing a system for the fully automatic control of a steel blooming mill. This should be the first of its type in the world.

At the same time, the British Motor Corporation is actively developing the use of electronically controlled shell-moulding techniques for use in the foundry in place of conventional foundry apparatus. Such a development could, it has been estimated, lead to a saving (through elimination of waste) of as much as £1m. a year. The same organization is also investigating a number of other different methods for reducing waste during production. This is important because it is estimated that the loss in terms of swarf—or unwanted metal— cut off from parts during machining and other processing techniques could be as great as £2m. a year.

METHODS OF CUTTING WASTAGE

Methods of reducing this wastage in a motor-car manufacturing plant can range from the use of such precisely controllable techniques as shell-moulding (already mentioned) and the cold forming of metals (which is important both because heat is one of the most difficult things to control precisely and because cold forming produces a relatively minute amount of waste metal) to the use of entirely new kinds of materials such as compressed wood, the shaping and processing of which can be very accurately controlled. It is of interest in this connection that the price of steel is estimated by the motor industry at 1s 6d a pound for the purposes of production, which is twice its real price, because of the very large amount of wastage involved in processing it.

NOT CONFINED TO LARGER COMPANIES

British automation is, therefore, not essentially in its future development an extension of so-called Detroit automation, where large numbers of transfer machines cut off large quantities of metal fully automatically from rough metal blocks to produce a finely formed finished product, yet producing at the same time a great deal of unwanted waste metal. Nor is it confined to large companies. Thus one small British knitting factory near Stafford has recently made an estimated saving of £50,000 a year by expending £1,500 a year on production and control work. It reorganized the factory set-up and used an electronic computer on a hire basis from a computing service nearby to watch over the operation of the factory and keep a constant check on production organization.

Another small factory employing a foundry and a machine shop has, as a result of adapting its production for automation, increased its output for the same number of staff. But it has also reduced its paper work controlling such items as machine-shop and purchase requisitions to about 1 per cent. of that previously involved. This represents a considerable saving worth several thousands of pounds a year in terms of time and money.

SYSTEM FOR CUTTING SHIPS' PLATES

Automation is not confined either to mass production. Thus Aerojet-General Corporation has produced a fully automatic control system for the cutting of ships' plates. The operation of this system depends on the use of a specially developed, electronically operated control unit. Ferranti has developed an electronic computer for machine-tool control which is capable of handling almost any type of machining operation on the basis of instructions which are fed into it. A new version—the first production model of this machine will cost between £15,000 and £20,000, will be made available to British industry within the next few months. Previously only prototype models had been available.

Ferranti has also collaborated with Fairey Aviation in the production of a special flexible-control machine based on the same system for the Heaton Chapel, Stockport, works of the latter company. This machine is designed to control milling operation where small batches of products are required. This machine is not, however, so flexible as the Ferranti computer-controlled machine, which can control the production of many hundreds of different parts. On the other hand, it is doubtful if the use of a computer to control even 15 or 20 machine tools simultaneously, let alone a single machine, is likely to prove profitable, except for the production of moulds for foundry castings or in the aircraft industry where an exceptionally large number of diversely shaped parts have to be made in small quantities.

CONTROL UNITS FOR MACHINE TOOLS

Similarly, the British Thomson-Houston Company has developed and is manufacturing a series of electronic control units for machine tools, which are capable of carrying out a varied series of instructions or of literally copying a model part presented to them. Machines of this type, manufactured by British Thomson-Houston, are now being used at the Briggs Motor Bodies Works at Dagenham for the production of dies for car bodies.

The majority of devices of this sort are, however, far too expensive for general use—either for large-scale use within a single factory or for use by the small company which does not have a large enough production to write off the relatively high capital cost involved fairly quickly. It is of interest, therefore, that one large British engineering company which is a user of such tools rather than a producer of them, namely the British Motor Corporation, has recently built and successfully operated the prototype of a new machine-tool unit. This is controlled by punched paper tape and is therefore more or less completely flexible within the limits of the mechanical unit to which it is attached. It has cost less than £3,000, including the cost of the actual machine tool. Working models of this machine are expected to cost between £1,000 and £1,500 and the prototype of a smaller machine is now being developed.

INSTRUCTING THE MACHINE

The problem here is that the small company wishing to use such a machine will either have to find a person who can learn to instruct the machine in terms of punched paper tape, or else the company supplying the machine must supply a service to carry out this operation. The problem with the latter solution lies in the fact that it necessitates the machine-tool supplier having a complete understanding of many different types of metal or plastics forming processes.

An entirely different field in which during 1959 automation will play an increasingly important part is that of power production. Already the Central Electricity Generating Board has installed an English Electric Computer for analytical purposes at Bankside. This computer will be used to check, analyse and plan the further development of Britain's electricity generating system, including the future development of the national grid. At the same time, Panellit is supplying a control system for the North Fleet power station, which should, it is estimated, increase the efficiency of this operation by about 15 per cent. and perhaps by a far larger figure. The resulting savings could run to several hundred thousand pounds a year.

One problem about the use of large electronic computers, and other types of electronic equipment for automation, lies in the fact that such devices often tend to occupy a very large amount of space compared to the size of equipment being controlled, especially where single units such as machine tools are concerned. They also produce a large amount of unwanted heat which has to be dispersed.

However, E.M.I. Electronics has recently announced that it is about to enter production with a computer using transistor crystal valves. This trend is being very widely developed in Britain and both Ferranti and Elliott-Automation have computers using only transistor crystal valves, which are not only more reliable but reduce the size of the computer or other type of electronic unit by a factor which can be as great as twenty times, and reduce the heat output to an almost negligible amount.

The Ferranti computer is a special purpose device designed for use in process control work and as the center of automation processes in several fields. The Elliott-Automation computer, the Elliott 802, will be produced not only as a straightforward series of computers of variable design, but also as a unit which can be specially linked to the new Panellit. Thus, the log data recording system can be applied to all kinds of industrial plants.

At the same time, one factor which is becoming steadily more apparent as automation develops is the need for control units to be not only flexible in their operation, but also flexible in their construction. They must therefore be built essentially on a unit system so that they can be assembled in a variety of different forms. Only in this way can the rapid growth of different types of production techniques—even within a single industry—be dealt with without a constantly recurring heavy capital expenditure.

Buy British

Thousands of shops and stores all over the United States stock British goods from chocolate to cars, marmalade to men's suitings, and whisky to willow calf.

Yet it might not always be possible to get just what is wanted at the right time. That is where the British Consulates can help. They know who imports what, and how easily goods can be bought direct from Britain.

If in need: **Consult the Consulate.** There are British Consulates in Atlanta, Baltimore, Boston, Chicago, Cleveland, Denver, Detroit, Houston, Kansas City, Los Angeles, Miami, New Orleans, New York, Norfolk, Philadelphia, Portland, St. Louis, St. Paul, San Francisco, Seattle, and Washington, D. C.

Good Design in British Exports

Nowadays it is common to say: "They don't make things like that nowadays," whether it is a Sheraton writing table or a tapestry. But Britain *is* making fine goods today, and *is* exporting them all over the world. Good materials, fine workmanship, and abundant attention to detail: these go to make those British goods which are not only easy on the eye but a pleasure to use.

Textiles, cutlery, travel goods, glassware, automobiles, furniture, pottery, carpets, wallpapers, cast iron stoves, gas cookers, table lamps, and radio receivers: all these and many other familiar household goods can become something rather special—if attention is paid to good design. In Britain today a new stimulus is operating: a quite new emphasis on art in industry.

THE COUNCIL OF INDUSTRIAL DESIGN

Britain, in fact, is paying more attention than ever before to producing practical goods that are also beautiful. For well over a decade now the Council of Industrial Design has been promoting "by all practicable means the improvement of design in the products of British industry." It has never attempted to design articles itself: its aim has always been to stimulate industry to improve design standards and to create public interest in better designs so as to widen the market for them.

Its members are industrialists, designers, retailers, journalists, and educators. The Council operates through the publication of a monthly magazine, *Design;* the staging of exhibitions in Britain and overseas; through press, radio, and television; by holding courses for retailers; and, above all, through The Design Centre opened by the Duke of Edinburgh in April 1956.

The Design Centre, in the heart of London's West End shopping district, offers a public display of all that is best in British design—from bicycle saddles to sofa beds and from toothpaste containers to stereo cabinets. Only those designs that have passed a rigorous selection board are shown; a new selection is put on view each quarter. In this the Design Centre differs from some Design Centres which have since been set up abroad; there, manufacturers and decorators simply rent space in the Centre to display wares of their own choosing.

In addition, at the London Centre, special displays—such as 'Design in Your Kitchen'—are made from time to time and certificates are awarded annually to manufacturers whose products have been chosen as 'Designs of the Year.' The certificate of the Council is becoming a coveted award; an incentive to manufacturers to employ good designers and a pace setter for designers themselves.

BUYERS' DELIGHT

What of the buyer? The Centre is a fine place for casual window shopping but it is more than that. Since opening in 1956 it has received over 1½ million visitors—well over 2,000 a day—from all over the world, and the important ones of course are the Buyers. Nothing is actually sold at the Design Centre, but to help the prospective buyer—whether the London housewife or the buyers from the great stores in all the world's cities—there is the Design Index—a photographic and sample catalog in which more than 9,000 available items of first class design are fully documented. The Index is reserved each week-day morning for trade buyers. The Trade Information Service, maintained on the spot, links buyers with manufacturers and distributors and puts other visitors in touch with retailers who stock the products which interest them.

THE WRONG BOX

Good design is not something abstract. It must be linked for example to the consumers needs.

Robert Louis Stevenson wasn't thinking of export packaging when he coined the title of his macabre yarn "The Wrong Box". But macabre tales circulate in the world export markets today—the wrong box! the wrong shape! the wrong size! For the last 10 years and more, since Britain launched on her stupendous task of paying her way by doubling her exports, the call has gone out for the *right* box the *right* shape and the *right* size. The right product too. Technical journals, conferences, instruction courses have pounded in this message to British manufacturers. The Design Council has played its part, and if the campaign has exposed the laggards it has also paid off magnificently in new standards of design and in the attitudes to the consumer adopted by manufacturers, engineers, and designers themselves. The results can be seen in exports to almost every country of the world, while the quintessence of good design can be seen in The Design Centre in London.

What is the Colombo Plan?

The Colombo Plan is a name given to the whole sum of the cooperative effort which the countries of South and South East Asia, helped by member countries outside the region, are making to develop their economies and raise the living standards of their peoples.

Its full title is *The Colombo Plan for Co-operative Economic Development in South and South East Asia.* There is no integrated master plan; each country of the region prepares and carries out its own development program although it has the benefit of consultation through the Consultative Committee. The plan was born in 1950 as a result of Commonwealth initiative.

The original members of the Committee were: Australia, Canada, Ceylon, India, New Zealand, Pakistan and the United Kingdom with its territories in Malaya and British Borneo.

They have been joined by: Cambodia, Laos, Vietnam and the United States in 1951; Burma and Nepal in 1952; Indonesia in 1953; and Japan, the Philippine Republic and Thailand in 1954. At the 1957 meeting of the committee, the Federation of Malaya participated as a full member.

Machinery of Co-operation: These countries are members of a Consultative Committee which meets annually.

The basis for consultation is provided by the survey by each country of its own development achievements, and its general economic problems and needs. An agreed assessment is then made of the problems of the area as a whole.

The meetings are attended by representatives of the International Bank and of the Economic Commission for Asia and the Far East.

External capital offered (gifts and loans) to countries in the region from member governments outside the region from 1950 to mid-1957 amounted to approximately £1,250 million; in the same period the International Bank lent £141 million.

Technical assistance comprises the supply of experts, the provision of training facilities, and the provision of equipment for training and applied research. A major channel for the provision of this assistance is the Colombo Plan Technical Co-operation Scheme under which assistance to the value of £12.7 million had been given, or arranged for, up to 31st December 1957.

The United States played host to the Colombo Plan Nations this fall. They met at Seattle. This article gives some background to the decisions that were taken. An account of the Conference and the Communique are given on the following pages.

The Colombo Plan

When the Ministers of the Colombo Plan countries met in Seattle in November many people had their attention drawn, perhaps never before so directly, to the problems confronting their 660 million fellow human beings in the 16 Asian countries represented. If the meetings did no more than this they will have fulfilled an important part of their assigned purpose. One of the original intentions of the Colombo Consultative Committee Plan was, precisely:

"To focus world attention on the development problems of the area."

In earlier years, the Ministers have held their annual meetings under hosts outside Asia—in London, Wellington (New Zealand), and Ottawa. In the area, they have met at Karachi, New Delhi, Singapore; last year in Saigon. In Asia and outside, since 1950 when it started, the Colombo Plan has been held up as a symbol of cooperative effort in widely scattered points in the free world. There is no doubt that it has inspired the free peoples among whom these councils have been held to give the necessary political support to vote the funds and to bear with greater hopes of ultimate success the long years before development programs bear fruit. But encouragement, exhortation and advertisement is obviously not the whole story. What is happening in these countries?

First, a reminder of the geographical and economic facts. Table I gives the 16 countries of the area—and their populations—almost a quarter of the world's total.

This population is increasing by 10 million a year—a fearful challenge to those charged with building up these countries. All efforts to date barely enable existing living standards to be maintained. The hope is and must be that present savings (supplemented by outside aid)—which are making long term capital projects possible—will yield such proportionately greater production in agriculture, in power, in industry, that it will not be too long before growing populations are adequately fed and the basis will have been laid for more rapid advances. But the years of waiting are years of

TABLE I

	Population (thousands) (a)	*Area (sq. km.)*	*Density (population per sq. km.)*
Burma	19,856	677,950	29
Cambodia (1955)	4,358	175,000	25
Ceylon	8,929	65,610	136
India (b)	387,350	3,288,876	118
Indonesia	84,000	1,491,562	56
Laos	1,450	237,000	6
Federation of Malaya (1955)	6,058	131,287	46
Nepal (1952-54)	8,432	140,753	60
Pakistan (c)	83,603	944,824	88
Philippine Republic	22,265	299,404	74
Thailand	20,686	514,000	40
Vietnam (d)	12,000	170,231	71
Singapore	1,264	741	1,706
North Borneo	383	76,112	5
Sarawak	626	121,914	5
Brunei	66	5,765	10
TOTALS	661,326	8,341,029	83
WORLD TOTALS	2,737,000	135,335,000	20
of which S. and S.E. Asia percentage	24	6	—

(Source: *United Nations Statistical Yearbook, 1957.*)

(a) Mid-1956 Estimates except where otherwise stated.
(b) Including data for Kashmir-Jammu.
(c) Excluding data for Kashmir-Jammu
(d) Figures taken from the Statesman's Year Book, 1957, for the population of the Republic of Vietnam up to the seventeenth parallel. By virtue of the agreement on the cessation of hostilities, signed at Geneva in July 1954, only that part of Vietnam south of the temporary demarcation line at the seventeenth parallel is at present under the administration of the Vietnamese Government in Saigon.

trial: for example, according to the UN Food and Agriculture Organization, food production has risen 23% in relation to the pre war years, but per capita, it has declined 6%.

INDUSTRY

India is the most industrialized country in the Colombo Plan region and is the only one with a long-standing industrial capacity. But since 1946 industry has also been developed to some extent in several other countries within the area with the help of assistance from abroad offered under the Colombo Plan. The desire of countries to process their own raw materials, and achieve self-sufficiency in certain manufactures, has fostered the growth of such industries as cotton textiles, paper, rubber re-milling, leather, sugar-refining, oil-seed pressing and other types of food-processing. Particular attention is now being given to expanding the production of basic commodities, notably cement, output of which has increased steadily. In Pakistan, for instance, substantial quantities of cement have had to be imported during previous years as a result of a large increase in construction work; since 1956, however, the country has been in a position to export cement. Heavy metals, heavy engineering, and chemicals industries have been developed in India; in Ceylon, Indonesia, Pakistan and the Philippine Republic, plants for the production of caustic soda, fertilizers, iron and steel and certain types of machinery have been constructed.

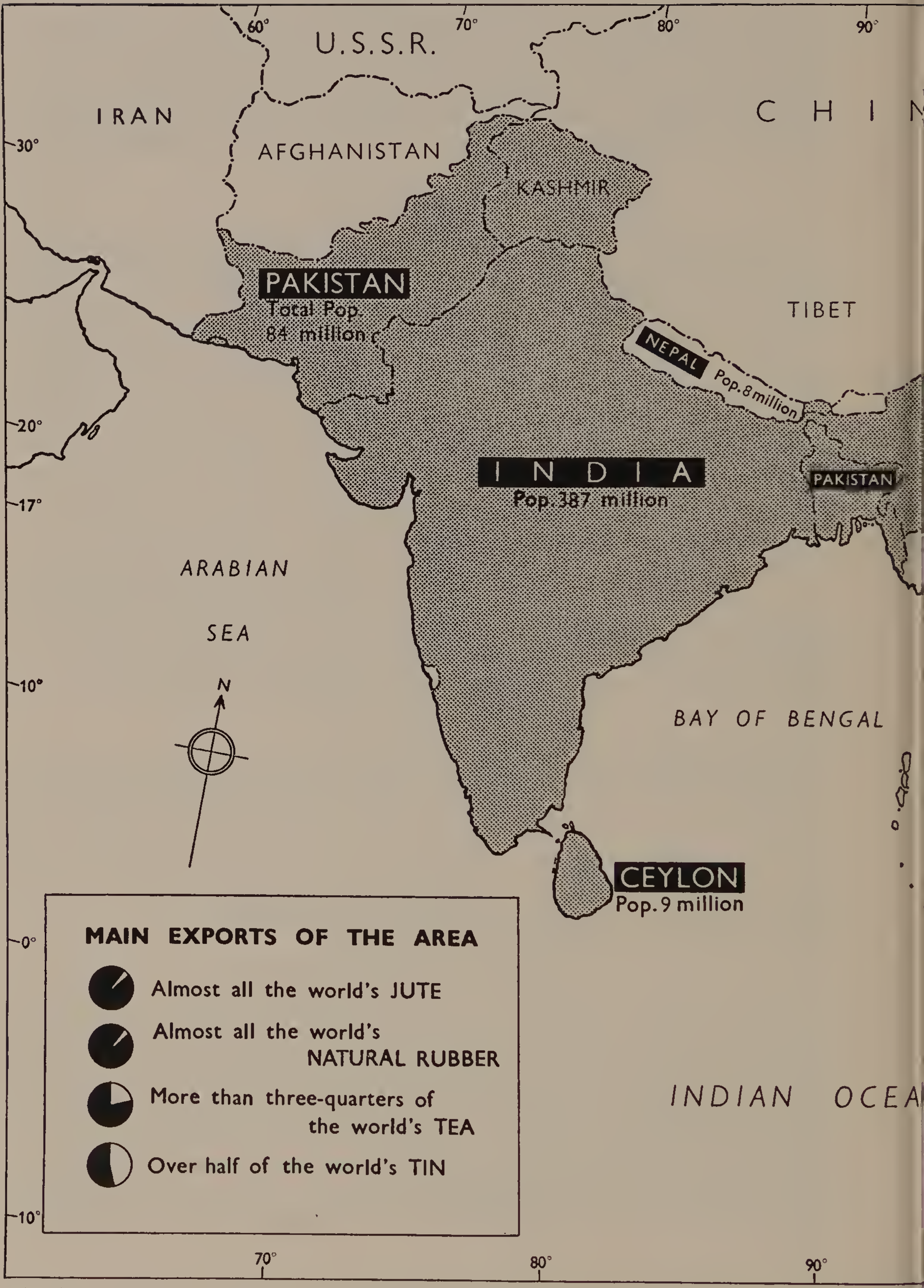
ROLE IN WORLD TRADE

The region's main exports are eight primary products: rubber, tea, rice, oils and oilseeds, sugar, tin, raw jute and raw cotton. These commodities acount for 50-60 per cent of the total value of exports of the region, and thus provide most of the region's earnings of foreign exchange. With the exception of rice, these products for the most part are marketed in industrialized countries outside the region. The violent price fluctuations which they are liable to encounter in world markets can cause sharp variations in both the foreign exchange earnings and the national income of exporting countries. The region is the major source of the world's supplies of several of these commodities, and produces almost all the world's jute (Pakistan), rubber (Malaya, Indonesia, Ceylon, Thailand, Burma, Cambodia and Vietnam), and tea (Ceylon, India, Pakistan and Indonesia). Since 1938, exports of rubber have nearly doubled, despite the growth of synthetic rubber production. It also produces over half the world's tin (Malaya, Burma, Indonesia and Thailand) and sizeable proportions of world exports of sugar (Indonesia and Philippine Republic) and rice (Burma, Thailand, Cambodia and Vietnam).

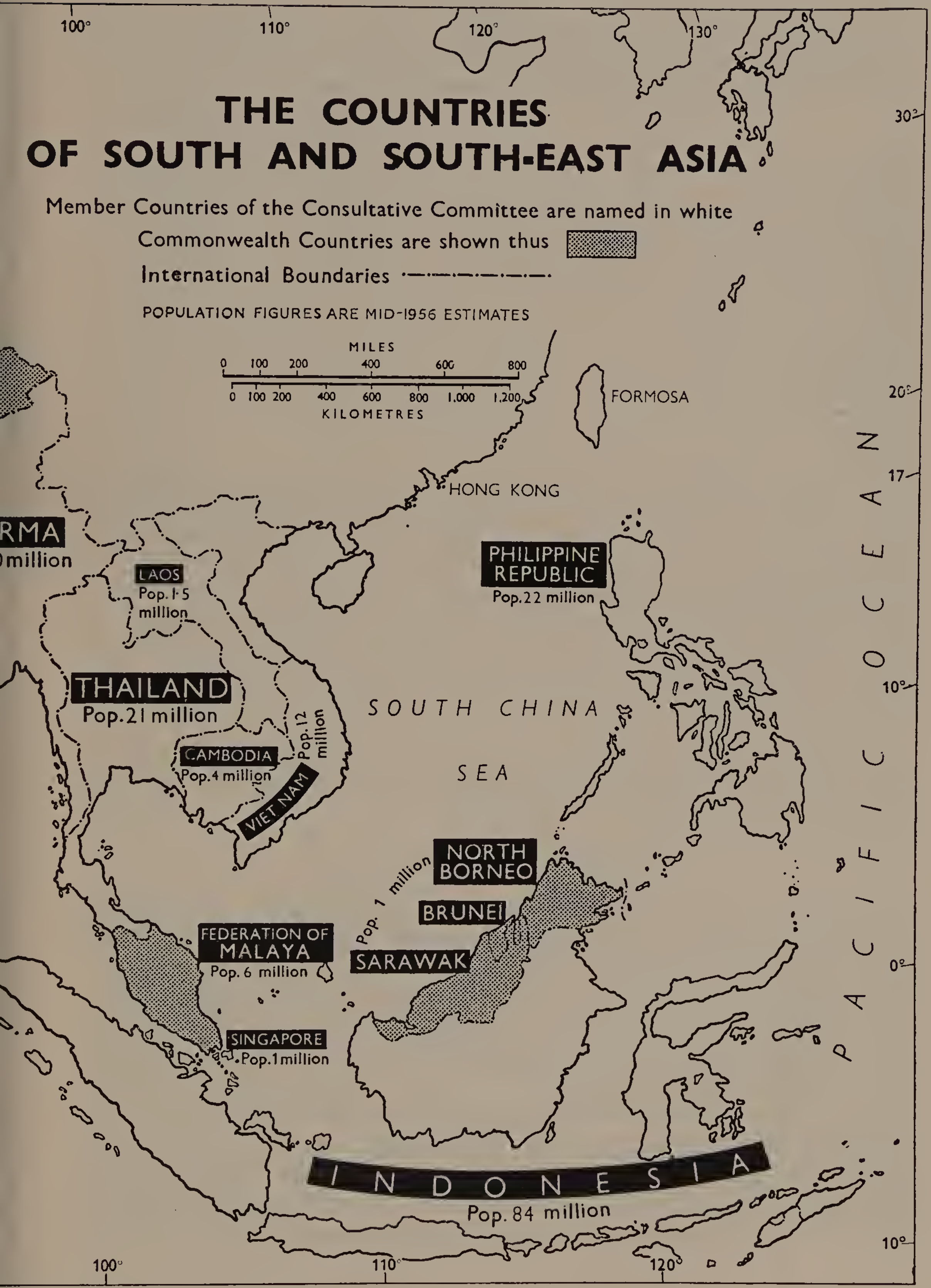
The war and its aftermath disrupted production and exports; capital no longer flowed as freely. A major object of the Colombo Plan is to strengthen the economies of the region, and raise the level of incomes and so promote a higher volume of trade both within the area and with the rest of the world. At present, about one-fifth of the region's external trade is with North America, and the rest is divided almost equally between trade with Western Europe and trade within the region.

DEVELOPMENT ACHIEVEMENTS

Nearly all these countries have well conceived programs of public expenditure, financed primarily from their own budgets and planned in the light of their own assessment of needs and availabilities. The Colombo Plan is no substitute for these plans. But, over the years, the practice of inter-governmental consultation which it offers has helped them along. It has helped the techniques of administration and set standards for practicable plans. These were badly needed in an area when so many of the governments and their civil servants were without previous experience.



THE STATUS OF JAMMU AND KASHMIR IS AT ISSUE BETWEEN INDIA AND PAKISTAN AND IS UNDER CONSIDERATION BY TH



OVERNMENTS AND THE UNITED NATIONS

TABLE II

GOVERNMENT EXPENDITURE UNDER DEVELOPMENTAL HEADS

(£ million at a constant rate of exchange)

Country	*1956-57 or 1956 Actuals*	*1958-59 or 1958 Budget Estimates*
Burma*	27.8	33.3
Cambodia	7.7	13.7
Ceylon*	37.1	41.1
India	849.6	1,015.6
Indonesia	108.3	172.6
Laos	7.2	10.4
Nepal	—	1.3
Federation of Malaya	55.0	70.0
Pakistan	120.5	226.5
Philippines	140.2	145.7
North Borneo	1.9	2.7
Sarawak	2.7	4.9
Thailand	25.0	33.0
Singapore	14.9	18.8
Viet Nam	18.1	25.6

NOTE.—These estimates should be regarded with great caution. The figures are not compiled on the same basis in all countries, different accounting periods are in use and differences in cost and price levels have to be taken into account. Also the significance of public investment will vary according to the emphasis placed on the public and private sectors in each country.

*Figures for Burma include capital expenditures in public enterprises.

Figures for Ceylon are based on reclassified data of receipts and payments of the Government of Ceylon and refer to total capital expenditures and current expenditures for economic development.

Figures for the Philippines refer to Actuals for the fiscal years 1955-56 and 1957-58.

Source: *Press Release issued at Seattle Conference, November 1958, extracted from the forthcoming Seventh Annual Report.*

Governments with very considerable experience like that of India (where a fine Civil Service had been built up long before independence) are able to give very special help in this respect.

EXTERNAL AID AND MUTUAL AID

The Annual Report includes separate chapters on the contributions made to each member country by other members. Mutual aid is a growing feature, especially in the field of technical assistance. Teachers on the spot and the many fine technical schools and universities scattered through the area are receiving students and sending out teams to help in spheres in which they specialize. The technical training schemes operated through the Colombo Plan have increased by about as many again the number of trained men available under the United Nations schemes and those operated directly by the US and by Britain. But there is no overlapping between these various schemes; there is room and enough for more than is being accomplished so far. And there is good coordination between them in the field. The importance of these training programs cannot be over-emphasized. Without them, many big development projects could not go through; valuable equipment would be wasted. Training is as necessary for tractor maintenance or office procedure as it is for public health or the handling of isotopes.

On the side of capital equipment—railroads, hospitals, port facilities, hydro-electric installations, for example—a striking result of the Colombo Plan is the way in which the Comonwealth countries, Canada and Australia and New Zealand—small countries in terms of population (16.1 million Canada, 9.5 million Australia, 2.2 million New Zealand)—have emerged as donors to the Asian countries projects as well as to the technical assistance program. Australia has spent or committed some £A28 million on specific projects; New Zealand £5.2 million. Appropriately enough New Zealand has specialized in agricultural, particularly dairy production. She has also made the major grant to the new All India Medical Institute. Canada has allocated $150 million for the projects she has sponsored and in addition Canada and Australia have supplied wheat against local currency which has in turn been used on local projects, on the pattern of US aid of this sort.

Britain has made available roughly £92 million in grants, loans and technical assistance, outside the releases of sterling balances she has made to India, Pakistan and Ceylon in accordance with an undertaking made when the Colombo Plan started. Between 1956 and 1958 India alone drew some £400 million. These balances, inherited by these states on independence, were no more or less than what was due to them but in so far as they are drawn the charge falls on Britain's reserves and resources.

Much of Britain's aid to these countries would have been called for without the impetus of the Colombo Plan: she has had continuing responsibilities to her colonies in the area and has not revoked her aid when some of these—as Malaya—have been raised to independent status. Similarly, on the technical assistance side, she trains far more people from her dependencies than the 2,000 odd training places she has afforded directly as a Colombo Plan contribution.

What of the US? She is a member of the Consultative Council, and while she does not appropriate aid or loan funds specifically for the Colombo Plan her aid exceeds all the rest. From 1950 to 1958 over $3,000 million in capital aid or technical assistance has been provided by the US Government to the countries of the Colombo Plan area.

Americans will find due acknowledgement in the Colombo Plan reports: they will have heard of the real pleasure their fellow members expressed at meeting this year in Seattle; and, following these proceedings and reports, they will surely be glad to know that other countries too are helping in these great tasks, each according to its ability.

The Seattle Conference

At Seattle on November 10, 1958, the Tenth Meeting of the Colombo Plan Consultative Committee was opened with an address from President Eisenhower.

Here are some quotations from his speech:

> "In eight years, your organization has grown from seven to eighteen member nations, representing more than a third of the world's population. As an informal and advisory group, it has helped these countries to work together in promoting the growth of south and southeast Asia. The Committee has contributed greatly to the efforts of free men to achieve economic progress."
>
> "The United States recognizes the Colombo Plan Association as a major instrument for the economic advancement of this region. It expects to take increasing advantage of your cooperative activities in shaping its own financing of development programs in south and southeast Asia."
>
> "Our task is a great one. It will take many years to fulfill. Yet if we undertake it boldly, with wisdom and determination, we can and will succeed. What are the steps that we should take? First, we must keep in mind our goal. That goal is to enable free nations to achieve a momentum of economic progress which will make it possible for them to go forward in self-reliant growth."

The President then outlined "five major requirements for economic growth" and described the Government's attitude to them. The five requirements were:

One: For expanded international trade.

Two: For technical skills.

Three: For private investment.

Four: For normal bankable loans.

Five: For financing to cover other sound projects which will afford the borrower flexibility regarding terms of payment.

THE MINISTERIAL CONFERENCE

The communique issued after the Seattle Conference is given in the adjoining pages. Other speakers described with a wealth of facts and figures just how their own economies were faring. Observers from outside the region were impressed with the amount these countries were doing to help themselves. The major source of finance for developing these huge areas of the globe comes from the budgets, the savings and taxation of the member countries. But all the speakers described the very real problems they were up against. None of them really hoped to carry through their programs without external assistance. These problems were pressing and urgent. The need for markets and fair prices for their own products was commented upon by several delegations as being quite as important and as useful as draughts of foreign aid.

Delegations who had joined the Colombo consultations since they began in 1950 paid tribute to their Commonwealth origins and to the nature of the work they permitted—free of political rancor and free, as one delegate put it, "of resolutions and counter-resolutions."

BRITAIN AND COLOMBO

The British delegate, Commander Noble, M.P., Minister of State in the British Foreign Office, first described the successful efforts to strengthen Britain's own economy in the past years including her greatly improved ability to lend abroad. (This is most important. President Eisenhower stressed the fact that America has more to lend from private sources than from public ones: it is the same in Britain. Most of the capital flowing to Commonwealth countries today is British private capital).

On government loans the British Delegate said:

"In the field of capital, our total contribution, in the last year of some £15 million, quite apart from the use of sterling assets and private investment, will be more than doubled when the time comes to write the report of the Committee next year."

"Now that our liabilities have been reduced we are once more in a better position to lend. This improvement has already been reflected in the announcement which was made at the Commonwealth Trade and Economic Conference at Montreal, that the United Kingdom would be prepared to make Commonwealth Assistance Loans from Exchequer funds and to make Exchequer loans more freely available to colonial territories. Under this provision the United Kingdom has already offered loans amounting to over £50 million ($140 million). However, our gold and dollar reserves are still not too high, considering the work they have to do, and the short term borrowings that we undertook in the last two years."

On technical assistance he said:

"I am happy to announce that the United Kingdom Government is prepared to make an additional £2 million ($5.6 million) available during the next four years over and above the technical assistance of £7 million in seven years promised in 1955. This will mean that we can achieve an average increase in our technical assistance contribution during the next four years of approximately 50%. Next year we hope to be able increase our current annual rate of expenditure by about one third. By 1961/62 it should be nearly double . . ."

"Only in 1956, I had the pleasant duty of making a presentation to the thousandth trainee to come to the United Kingdom under the technical assistance program. By June of this year the number of trainees received into the United Kingdom had jumped to no fewer than 2,077. I think it will be agreed that the increase in the rate of progress revealed by these figures is no less impressive than the actual total which has been achieved.

"As development plans progress they generate an increasing demand for trained people, not only to watch over the overall planning or to prepare new projects but also to operate and maintain those that have already been completed. It may be that more technicians rather than the more highly trained people that we call 'technologists" will be needed. In other words there must be people who look after machines as well as people who know how machines should be looked after. The main point is to ensure that a proper balance is maintained between different skills and different levels of training in relation to the growing and changing need of the economies.

". . . the Commonwealth countries at Montreal decided in principle to establish a scheme for 1,000 Commonwealth scholarships and fellowships of which the United Kingdom will provide 500. This scheme will cover a somewhat different field and cater for somewhat different needs than those which the United Kingdom has hitherto dealt with under the Colombo Plan. But it is our hope that the scheme will contribute to the spread of that indefinable insight, transcending and complementing technical skills, which is needed in all phases of the life of nations."

In his concluding remarks Commander Noble referred to the need for expanding trade as well as credits and aid. He said:

"We in the United Kingdom do indeed believe in the economic interdependence of all countries. I should like to quote some remarks by my Prime Minister. . . . Mr. Macmillan said: . . .

'We must do everything we can to prevent the recrudescence throughout the world, even in periods of temporary trade recession or difficulty, of purely protectionist and inwardlooking methods of thought and action.

'It really is an illusion to believe that a nation can get rich by the poverty of others . . . The spread of trade means rising standards and increasing wealth for all.'

"Within the limits permitted by our own stability, which matters to so many countries besides our own, and subject to our heavy commitments to others, we shall continue to contribute our utmost to bringing greater prosperity to the countries of South and Southeast Asia.

THE COLOMBO PLAN COMMUNIQUE

The Consultative Committee of the Colombo Plan for Cooperative Economic Development in South and Southeast Asia met in Seattle, Washington, from November 10 to 13, 1958. This was the Tenth Meeting of the Consultative Committee, created at Colombo, Ceylon, in 1950 to "survey the needs, to assess the resources available and required, to focus world attention on the development problems of the area, and to provide a framework within which an international cooperative effort could be promoted to assist the countries of the area to raise their living standards."

Each year the Consultative Committee reviews the progress made, the problems encountered, and the tasks that lie ahead in the effort to accelerate economic development. The basic concept of the Colombo Plan is cooperation. Each country does what it can to further the long-run development of the area through its own development or economic assistance programs, for which the separate countries retain full responsibility.

The Tenth Meeting of the Consultative Committee was attended by Ministerial representatives of the 18 member countries: Australia, Burma, Cambodia, Canada, Ceylon, India, Indonesia, Japan, Laos, Malaya, Nepal, New Zealand, Pakistan, the Philippines, Thailand, the United Kingdom, together with Singapore, Sarawak and North Borneo, the United States and Viet-Nam. At the inaugural session the Consultative Committee was addressed by the President of the United States, who outlined a "Program for Progress" in the field of economic development.

During the Seattle meeting it was evident that the consultative technique of the Colombo Plan has proved its worth. The periodic discussion of national economic development programs and of bilateral economic assistance arrangements between member countries has contributed greatly to the international association the Colombo Plan is well designed to meet the economic needs and national desires of the member countries. It has become a symbol of the economic aspirations of hundreds of millions of people.

The Annual Report of the Consultative Committee prepared and approved at the Seattle Conference will be released in full in the capitals of the member countries on or after December 29, 1958.

During the year reviewed in the report, significant progress continued to be made in furthering the development of the Colombo Plan region. The rate of progress was, however, somewhat less than in previous years. It appears that the rate of growth in per capita real income in the region mentioned in previous reports was not maintained. In some countries of the region, adverse weather and a decline in food production, inflationary pressures and heavy imports accompanied by a decline in export earnings, and other factors, occasioned setbacks. This Conference, however, was confident that these setbacks would not reverse the forward movement of economic development as a whole. Progress continued to be made at a substantial rate in such vital economic sectors as industrial capacity and improvement of basic facilities, including roads, irrigation and land reclamation.

In the region as a whole public investment is playing a substantial role in development activities. However, the predominant position of the small cultivator and small businessman in these underdeveloped areas underlines the importance of private initiative and of widening the opportunities for private enterprise. The committee noted that member countries in the area have increasingly recognized the importance of private investment and have encouraged the growth of the private sector. Important also in this growth is the role of foreign private investment which can provide capital together with the technical and managerial skills so needed by the countries of the region. There is an increasing awareness of the need to attract foreign investment.

The Committee noted that by far the greater part of the economic resources devoted to the development of South and Southeast Asia has come from the countries of the area and would continue to do so. The Committee emphasized the importance of sound fiscal and monetary policies in further encouraging, wherever practicable, savings for developmental purposes. These public and private resources from within the area have been supplemented by important aid from outside. In the past year over $1,000 million in economic assistance have been made available by contributing members of the Colombo Plan to the countries of South and Southeast Asia. Since the inception of the plan about $5,000 million of external aid has been made available to help promote the development and economic stability of these countries. The variety of forms and sources of this aid is impressive. The Committee also noted that of the total training awards under the Colombo Plan Technical Cooperation Scheme the proportion provided by countries within the area increased from 11 percent to 20 percent during the year under review.

The Committee stressed the growing importance of technical assistance to the development progress of South and Southeast Asia. Unless the scope and variety of skills in the area are expanded, growth will be retarded. Increasing availability of external capital emphasizes even more the importance of meeting the requirements for training and skills in order to assure effective utilization of such capital.

The economic development of the less developed areas is a major challenge of our times. The peaceful evolution of world civilization requires that this challenge be met. In South and Southeast Asia the Colombo Plan is a major international instrument for attacking these problems on a cooperative basis. As a result of their ministerial meeting in Seattle, the representatives are confident that the members of the Colombo Plan will bring renewed vigor and determination to the tasks ahead, to the end that for hundreds of millions of human beings material progress may be achieved and the dignity of the individual enhanced.

The Committee agreed that its next meeting would be held in Indonesia in 1959.

INTERDEPENDENCE

At Montreal . . . as a Commonwealth we reaffirmed our faith in the policy of the maximum freeing of trade and payments — a policy which we feel gives us all the best chance to attain that steady and sustainable economic expansion on which our future depends . . .

Mr. Amory, Chancellor of the Exchequer,
IMF, New Delhi, October 7, 1958.

[*The underdeveloped countries*] *asked to be reassured that their economic and political circumstances were not only understood by highly developed nations, but should be seen to affect the commercial policies of those nations . . .*

Sir D. Eccles, GATT, Geneva, Oct. 16, 1958.

. . . a decision to buy or not to buy, to restrain credit, to impose tariffs and quotas, has its effects everywhere, affecting the delicate balance of interdependence on which the whole depends. If this structure falls it can only do so as a result of our own neglect. The enemy without . . . is observing all our doubts and hesitations.

Commander A. Noble, Minister of State for
Foreign Affairs, New York, Nov. 19, 1958.

We must do everything we can to prevent the recrudescence throughout the world, even in periods of temporary trade recession and difficulty, of purely protectionist and inward looking methods of thought and action . . . It really is an illusion to believe that a nation can get rich by the poverty of others . . . The spread of trade means rising standards and increasing wealth for all.

Prime Minister Macmillan, Nov. 4, 1958.

British Government investment in Commonwealth Countries

Elsewhere in this issue of *British Affairs* accounts are given of the scale and direction of private investment abroad and of the Colombo Plan. For the sake of clarity the main outflow of *public money* from Britain to those territories to which she has a primary responsibility is set out under four heads.

Colonial Development and Welfare Funds

In the 12 years from April 1946 to March 1958 the total issued under the powers given in the Colonial Development and Welfare Acts (the first of which was passed in 1929) came to £156 million ($437 million). Only 1 per cent was in the form of loans.

The Colonial Development Corporation

The Corporation was set up in 1948 for the purpose of helping Colonial Governments in development projects. Its original borrowing powers of £100 million have been raised to £150 million of which £130 may be borrowed from the British Government. So far the Corporation has committed over £80 million.

International Bank for Reconstruction Loans

During the years of non-convertibility since the Bank was established few governments have been able to allow the Bank free use of all of their subscriptions. But in 1953 the British Government undertook to make £60 million of its subscription available for sterling loans for the Commonwealth countries. This has since been increased to £80 million of which rather more than half has now been committed.

New Proposals

Additional economic assistance for Commonwealth development was announced by the Chancellor of the Exchequer, Mr. Derick Heathcoat Amory, at the Commonwealth Trade and Economic Conference in Montreal in September.

This will operate as follows:

In the case of *independent countries* of the Commonwealth, Economic Assistance loans will be granted to Commonwealth Governments under Section 3 of the Export Guarantees Act.

For *Colonial territories,* a new system of Exchequer loans will be made by extending the Colonial Development and Welfare Acts.

Britain is also to widen the basis on which *subordinate authorities* in the less-developed countries of the Commonwealth may borrow.

The *Commonwealth Development Finance Company* (a private company formed with Bank of England support and with an authorized capital of £15 million) may seek to broaden its basis.

Britain is a free enterprise country. At home, about 80 per cent of industry is in private hands. Abroad, the bulk of British investment comes from industrial corporations and private savers.

Role of Private Investment Abroad

Private investment forms the bulk of Britain's investments overseas. Since the 18th century large scale British investment has aided countries whose economies needed external capital. At first British investors were developing plantations abroad and investing in countries under British control. But after about 1820 British money poured into industrial projects, trans-continental railroads, and public utilities all the world over—in the United States, Canada, Argentina—to name a few of the more important countries. British private investors also made large loans to public authorities—federal governments, state governments, and local authorities.

In the 1820's, British investors lent about £20 million to the new countries of South America struggling for independence. Between 1815 and 1830 over £50 million was lent to European countries, much of it for reconstruction following the Napoleonic Wars. By 1913, total British private investment abroad, in publicly issued securities alone, amounted to £3,763 million—about £15,000 million at today's prices. Nearly half of this was within what is now the Commonwealth; about one fifth in the United States, and about the same amount in Latin America. The balance was invested in Turkey, Egypt, China, and Japan, with smaller sums in many other countries.

Railroads took about 40 per cent of the total, with 30 per cent in government and municipal securities, and 30 per cent in public utilities, commerce and industry, raw materials, and banking and finance.

Over and above these holdings in public securities were the substantial sums directly invested by British companies. There was also considerable investment in world-wide shipping services and in the network of submarine telegraph cables.

LOSSES IN WORLD WARS

During World War I Britain had to realize some £850 million of her overseas investments, but in 1919 her role of leader to the world was resumed, and in the twenty years to 1938 the London market raised some £1,600 million of new money alone for investment in foreign countries. By 1938, Britain's net income from "invisible" exports—banking services, insurance premiums, shippings, investments, etc.—was paying for 28 per cent of Britain's total imports. Yet the yield from these investments was no more on average than on domestic securities. This is still roughly the case.

World War II saw a repeat performance of the sale of investments in World War I. Despite US Lease-Lend some £1,000 million of Britain's overseas investments had to be sold and large foreign debts were incurred. In the immediate post-war years there was actually a deficit on "invisibles." Gradually the position changed as overseas investments became more profitable, and as shipping and other services expanded. Today, "invisibles" pay for less than 10 per cent of Britain's imports—a figure considerably smaller than in 1938 but still of great importance in Britain's external economy.

CURRENT INVESTMENT ABROAD

In recent years, the net private long term capital outflows from Britain (including new money and direct investment) has averaged £200 million* a year.

Today, investment concentrates more on primary producing industries such as rubber, tea, copper, and uranium, and on the establishment of British companies to make motor cars, chemicals, and textiles. Oil investment in the Middle East has also been heavy.

More than half of this £200 million (net) goes to the sterling Commonwealth (i.e. excluding Canada in which new British investment has averaged $100 million a year since 1953.)

Commonwealth and Colonial Governments borrowed £134 million on the London Market (i.e. from private subscribers) between 1952 and 1957 while private interests (business firms, etc.) in the Commonwealth borrowed roughly £200 million from the same source in the same period. A study by the Reserve Bank of India shows that by far the greater part of overseas investment in that country is British private investment. Of the £1,000 million invested in the British Colonial territories since the war about half is identified as private capital, while for the sterling Commonwealth, which embraces a quarter of the world's population, British capital provides 70 per cent of the foreign investment and the greater part of this is private.

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*This is the long term investment from Britain in the rest of the world *less* long term invesment by the rest of the world in Britain. It so happens that this figure of £200 mn. of *private investment* in the *world* as a whole is the same amount as *total (i.e. private and Government) investment* in the *Commonwealth.*

Investment In Progress

Britain has made and is still making a significant contribution to overseas development. Since the end of World War II, the sterling Commonwealth has received 70 per cent of its external investment from Britain.

The story of Britain's historic role in providing funds for capital hungry countries is told in a recently published booklet: *Investment In Progress.*

Copies are available free from BIS, Free Material Section.

THE CDFC

The Commonwealth Development Finance Company (CDFC) is a comparatively new channel for investing private capital in the Commonwealth. It was set up in 1953, with capital subscriptions from 91 business concerns in Britain and from the Bank of England. Its purpose is to invest in programs likely to benefit the sterling area's balance of payments and in particular those for which adequate capital cannot be raised from ordinary sources. These are usually new ventures. Its capital is £15 million and it is empowered to borrow up to twice that amount on the market.

By March 1958 the company had 14 commitments in 8 Commonwealth countries valued at £14.6 million ($41 million). They included the Algom Uranium Mines in Canada, the Chirundu Sugar Estates in Rhodesia, Peak Timbers in Swaziland, and the Sui Gas Transmission in Pakistan. It was announced at the Commonwealth Trade and Economic Conference in Montreal in September that the company may seek to broaden its basis by raising capital from other Commonwealth central banks and governments. The Bank of England may also provide further resources.

OVERSEAS TRADE CORPORATIONS

In London, there is a tradition of investing overseas without parallel in any other financial centre. It continues, and recently the British Government has encouraged it in a special way. The Finance Act 1957 afforded a substantial measure of tax relief to "Overseas Trade Corporations"—companies operating wholly overseas—which should enable them to increase the amount available for re-investment overseas and for expanding their field of operations.

ESTIMATES OF OVERSEAS INVESTMENTS

Few estimates of Britain's overseas investments are available, but the Report on UK Overseas Investments 1956 published by the Bank of England in 1958 gives the total *nominal* capital value as £2,110 million.

These estimates cover the investments of residents of the United Kingdom through the medium of securities quoted on, or otherwise known to, the London Stock Exchange, including US and Canadian dollar market securities on which information is available to the Bank of England through the operation of Exchange Control. They form only a part of Britain's total investment—direct and portfolio—abroad. As regards direct investment, the figures do not cover firms which operate at home as well as overseas or, for example, Britain's world-wide investment in shipping. As regards the values given they refer to the nominal value of the original investment: today's market values are generally much higher than the nominal values.

What, admittedly then, is lacking is a neat, once-for-all figure that will show the current value of this investment. The statistics are being improved but a serious difficulty about collecting the figures is the very freedom with which capital moves out of Britain to the other sterling countries—obviously the biggest area of Britain's investment.

Through all the difficult years there has been complete freedom for private British capital to flow into these countries.

Industrial Britain

The Old and the New. Britain's industrialization goes back two hundred years. Old skills have been grafted on to new industries and modern processes. Pottery, textiles, jet planes, atomic energy, and electronics: these are some of Britain's industries.

The story of British industry and capital investment at home is told in this well illustrated booklet of 32 pages with maps and tables.

Copies of *Industrial Britain* are obtainable free from BIS, Free Material Section.

The last restrictions on time-buying in Britain were removed on October 29. Now, down payments and length of time for repayment are determined between retailer and customer.

Instalment Buying
The "Never-Never" System

Instalment buying, called hire purchase or the "never-never" in Britain, is used mainly to finance sales of durable goods which, over a number of years, have increased faster than other forms of personal consumption.

At mid-1958 total debt on hire-purchase and other forms of instalment credit for durable goods amounted to £503m., about a quarter as much as that owed on house mortgage. More than a third of the debt was on private cars and a quarter on furniture:

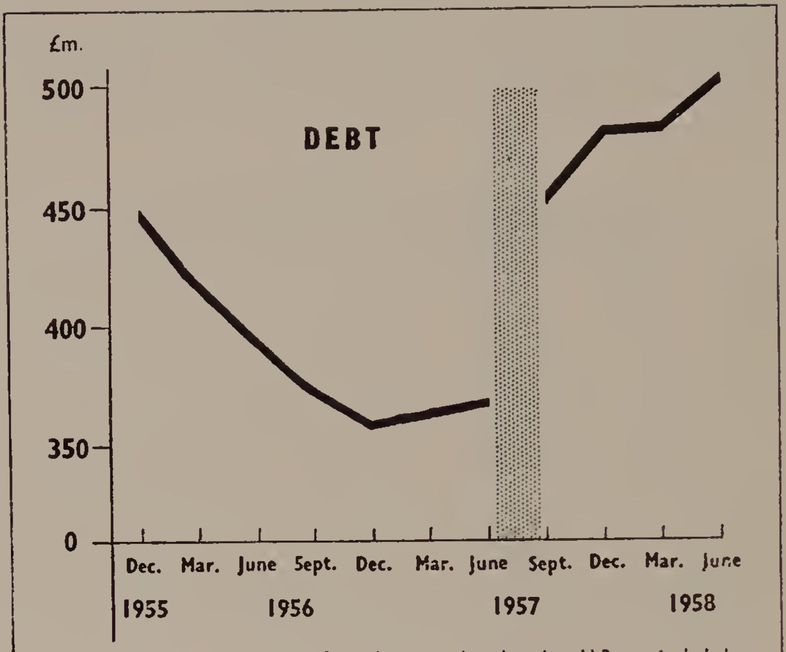
	£m. approx.
Furniture and furnishings	123
Hardware, radio and electrical goods, cycles	105
New private cars	50
Used private cars	120
Motor cycles	15
Caravans	7
Commercial vehicles	45
Farm equipment	7
Industrial equipment	20
Total (including other goods)	503

Over half the furniture, electrical and gas appliances, a third of the radio and half the television sets, are sold on hire-purchase or some other form of credit sale. About a fifth of the home sales of new cars are made on HP, and the proportion for used cars is probably higher. More than £90m. of the £503m. was probably owed by businesses, e.g., for farm and industrial equipment, commercial vehicles and cars. So the debt owed by families for durable goods was probably of the order of £400m., an average of £25 per family.

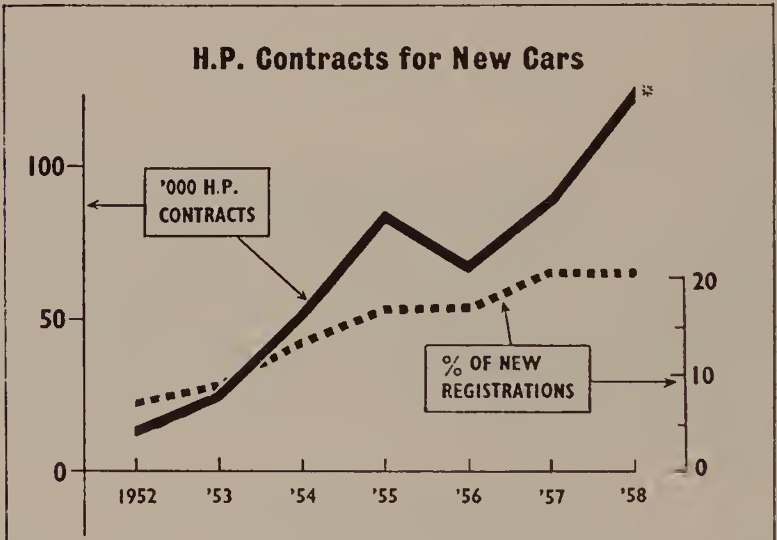
TRENDS AND DEVELOPMENTS

Hire-purchase sales of furniture and furnishings have shown little change, apart from seasonal fluctuations and a low August figure this year, since the autumn of 1956; and they were then lower than in some previous years. So were credit sales of radio and electrical goods and

INSTALMENT BUYING



NOTE: *After June 1957, forms of instalment credit other than H.P. are included.*



** First 6 months at annual rate.*

hardware, which improved substantially during 1957 but lost some ground again by mid-1958:

(percentage change on a year earlier)

	1956	*1957*		*1958*
	4th qtr.	*1st qtr.*	*2nd qtr.**	*July*
Furniture and furnishing shops	— 9	+ 3	+ 3	+1
Hardware, radio and electrical goods shops	—18	+12	+24	—7

*Up to the second quarter of 1957 these statistics were not complete in their coverage of instalment credit other than hire purchase.

Between 1952 and 1955 there was a fourfold increase in HP car sales, between 1955 and 1956 a slight fall, and between 1956 and 1957 an increase of more than a half. HP contracts have risen faster than total car registrations and the proportions of new cars sold on HP has nearly trebled:

Hire Purchase Contracts for Cars (000)	*1952*	*1953*	*1954*	*1955*	*1956*	*1957*
Total	105	194	306	425	404	640
New	14	26	53	85	70	91
Used	91	168	253	340	334	549
HP Contracts for New Cars as Per Cent of New Registrations	7.5	9.0	13.6	17.0	17.4	21.2

WHO PAYS?

Most instalment credit for motor vehicles, as well as agricultural and industrial equipment, comes in the first place from finance houses, which make agreements with the purchaser of the goods, using retailers or manufacturers as intermediaries. In this way they finance about 60 per cent of instalment credit for durable goods. Most agreements for household goods are financed directly by retailers, though some of their agreements are re-discounted by finance houses. A few manufacturers, e.g., of motor vehicles and bicycles, themselves finance the credit sales of their products. Finance houses borrow the money they lend for instalment credit from the public and from banks; retailers borrow from the banks and from finance houses (through the re-discounting of agreements), and also use their own savings.

PARTICIPATION BY BANKS

Within the last few months more than a dozen of the larger banks, including the "Big Five" London Clearing Banks, have acquired substantial interests in the principal hire purchase finance houses. Three of the "Big Five" and several other banks have also introduced personal loan schemes for personal expenditure; these moves have stimulated competition for hire purchase business and have tended to reduce the interest rates charged for hire purchase transactions.

The only publications which British Information Services sell are those published by Her Majesty's Stationery Office. The books below are usually kept in our library and may be read in our reading room or borrowed on Inter-Library Loan.

Book Reviews

The Work of the Queen by Dermot Morrah (William Kimber, London, 1958, 191 pages, 21s.)

"The Privy Purse entrance to Buckingham Palace leads to a long corridor from which opens on the right-hand side a series of quiet dignified apartments. Each is occupied by one of the private secretaries or other confidential servants of the Queen or the Duke of Edinburgh. It is possibly the most important duty of these dedicated men and women to keep open the lines of communication between the Queen and her subjects, both by bringing to her aid all who have anything to contribute to her limitless function as universal representative of the entire British Commonwealth of Nations, and by helping to keep her personality present and vivid to the minds of all her peoples."

This extract from the Acknowledgements in this book conveys the tone and style of Mr. Morrah's approach to *The Work of the Queen*. Mr. Morrah, Arundel Herald Extraordinary, has written this authoritative account of the day-to-day work that is carried out by the Queen and the responsibilities that fall to her in the discharge of her duties. The book answers a question in the minds of a lot of people. Just what does a Queen *do?* Mr. Morrah describes the Queen's daily tasks and the manner in which they are handled. He portrays the nature, variety, and weight of the matters that call for the Queen's personal decisions.

The book is beautifully written and produced.

£ £ £

The Making of Higher Executives: The Modern Challenges by Sir Noel Frederick Hall (New York University, 1958, 100 pages, $2.50.)

The New York University lectures collected in this volume deal with one of the major problems facing the highly industrialized nations of the West, that of adequate and responsible leadership in business and economic affairs. Sir Noel Hall, an eminent British educator and experienced public administrator, has an additional qualification to speak in that, since 1946, he has been Principal of the Administrative Staff College at Henley-on-Thames, a unique educational institution in Britain, which for over ten years has sought, not by "theory but by improved practice," to train executives at the critical stage in their careers when they pass from limited—specialized or departmentalized—managerial duties to responsibilities at a higher level.

Sir Noel has divided his material into three lectures. In the first, he discusses the demands that are made upon the higher executive, the nature of his developing responsibilities, the decisions which he has to make, and the facilities available to him in doing so. In particular, he explores the apparent paradox that often, while a man can qualify for the highest posts only by securing the best possible practical experience in more subordinate positions, nevertheless the practical experience may by itself be inhibiting or inadequate when he reaches higher levels. In the second lecture, Sir Noel explains the workings of the Administrative Staff College, and in the third he puts into fresh perspective the different stages in the development of managerial qualities from school days up to the highest levels in industry.

These lectures do much to clarify a subject in which there has still not been time to digest and assess a mass of experimental work. In addition, Sir Noel's ideas are important and thought-provoking. "In our society," he writes, "experts are good servants, but indifferent masters. This seems to me to be the center of the modern challenge in the field of executive development." And, he might have added, "the center of the modern challenge" in a much wider field if the democracies are to reconcile a high degree of technological development with the democratic process.

£ £ £

Can Inflation be Controlled? by Harold G. Moulton (Anderson Kramer Associates, Washington, D.C., 1958, 296 pages, price $4.95.)

The excuse for a note in *British Affairs* on this all American study must be that interdependence in the study of inflation is at least as reasonable as is joint research and action in defense against more obvious sources of attack on our two societies.

The President Emeritus of the Brookings Institute gives a most readable account, with appendices, of just about every economic theory ever propounded which has a bearing on the issues of inflation. This is an education in itself: but alas! all are dismissed. All are found to rest, however indirectly, on the "traditional assumption that the supply of goods and the supply of money are independent of each other." They are therefore invalid. We deal today with pecuniary economies, Dr. Moulton argues, in which monetary costs can not be separated from real costs of production. All services command a pecuniary reward and unless these rewards are held in a constant ratio to productive output prices will rise. The hope that wage (and presumably profit) restraint will be identified with long term self interest—so that increased productivity results in lower prices *as well as* bigger rewards—is the only hope offered. This is too slight a summary of a profound study. But if the essential point is there, would it be presumptuous to challenge the absoluteness of Dr. Moulton's conclusions by reference to British experience? What may be true in the long run may perhaps be less absolute in the short. In practice it *is* possible to limit the course of inflation—it *is* possible, by rigorously limiting the supply of money to bring the economy to heel. Only time will show for how long the British experiment of reducing the supply of money and credit will have given lasting results, but a measure of stability has been achieved in the face of a postwar inflationary trend worse if anything than the United States has experienced. But there is a price. The economy has had to slow down; individuals, as well as remote corporations, banks and the Government itself have had to accept forced restraint on their consumption and their borrowing. Severe political hazards follow: Perhaps it is better to live with inflation—if you can afford it.

But no such speculations should be taken as belittling this scholarly work. Conclusions are less important in this field than is understanding. Dr. Moulton helps us all to a better understanding of one of the most vital contemporary problems in Britain no less than in the United States.

£ £ £

The Rise of the British Rubber Industry by William Woodruff (Liverpool University Press, 1958, 246 pages, 35s.)

Rubber is a peculiar commodity. Caoutchouc, the milk-like fluid of many tropical and semi-tropical plants, has been known to Europe only since the discovery of the New World. But it was well known to the Aztecs who played games with balls which bounded "incredibly into the ayer"—an obvious reference to baseball. Columbus on his second voyage to the New World in 1493-6 saw balls "made of the gum of a tree" being used by the Indians of Haiti.

For hundreds of years rubber has been used to fashion footwear and bottles, but it was not until the 1800's that the methods of preparation and manufacture basically changed. The Scots chemist Charles Macintosh and an English inventor Thomas Hancock began their experiments at the beginning of the 19th century. It was not long before Mr. Macintosh put his knowledge to frugal use by daubing a rubber solution between two pieces of cloth and wearing the result as a raincoat—or a mackintosh as it is now spelled.

It was, however, an American inventor, Charles Goodyear, a Connecticut Yankee, who made real progress in the use of rubber by discovering its possible vulcanization in 1839.

Of equal interest is the original development of the far eastern rubber plantations. Rubber plants and seeds collected in Central and South America were cultivated in the Botanical Gardens at Kew, London. From there, in the 1870's they were distributed to Britain's tropical colonies. Thus, almost unnoticed, the nucleus of the plantation industry in Asia was formed which today is the world's main source of natural rubber.

The book is replete with similar accounts from this interesting botanical industry. In an indirect sense it is testimony to Britain's commercial activities and growth in the 19th century and to the development in her dependent territories which has gone on steadily, often with very little recognition. But the book is also a most interesting account of the development of a major industry which is still important despite the growing use of synthetic rubber.

£ £ £

Business and Specialized Publications of Great Britain by The Council of the Trade and Technical Press, London, 1958, 111 pages.

Life is becoming increasingly specialized. Even technical and trade magazines are using fewer and fewer general articles as television supplies more and more of the general padding. Thus a book listing Britain's magazines in the fields of technology and commerce is valuable not only in Britain but abroad. The Canadian Trade Mission recently paid tribute in its Report to the "excellent and authoritative British trade and technical publications."

The variety is amazing. One could believe that a trade and technical journal called *Ice Cream Industry* covered every angle in the production and distribution of ice cream and frozen confectionery? And it does. It is listed in this reference book along with *Fishkeeping and Water Life, Petroleum, Wool Review,* and dozens of others.

There is a list also of directories, year books and annual publications, and a classified guide by industries and subject matter.

£ £ £

The City's Invisible Earnings by William M. Clarke (Institute of Economic Affairs, London, 1958, 110 pages, 5s.)

The City, in London, corresponds to the downtown or financial area in American parlance. It is a strange place, says Harold Wincott in the preface to this book. "Its origins and interests are essentially international, covering virtually every country, currency, and commodity in the world. Yet it has much of the village in its make-up; if you have worked there over an extended period you can hardly walk down one of its streets and lanes without meeting someone you know. And although, by reason of the nature of its business, the City spends most of its time looking outwards, it has much of the insularity of a village."

Such a description of Britain's central market place—markets for shares, money, bullion, metals, shipping, wheat, rubber, tea, wool, furs, diamonds, and insurance—hints at the mystery behind all this commercial and financial activity. Here, in the City of London, that square mile in area although not a square by shape, London's financial skill serves the world and brings profit to Britain.

Why should these earnings be called "invisibles." The thousands of brokers, bankers, insurance agents, and commodity dealers would hardly agree that the work is invisible. Neither would the clerks, and shorthand typists. The term invisibles is useful, however, to distinguish between these earnings and those from importing and exporting actual visible goods. The earnings are invisible too as they spring from expertise. The arbitrageur in foreign exchange, the shipping agent, and stockbroker, are all providing services—not actual goods.

A new book on this subject, with a fresh approach, has recently been published. It is more than just another book on "the City." It is small but it covers much ground. It explains what the different sections of the City actually do in providing services for foreign customers. It also estimates as far as possible how much foreign income each section earns. It tells how the City's functions have changed considerably over the years, especially since the end of the war.

The basic framework for a survey of the City's foreign earnings was provided in an answer in the House of Commons on December 19, 1957. It was then suggested that in 1956 the City's foreign earnings amounted to roughly £125 million, made up as follows: insurance, £40 mn., merchanting, £30 mn., brokerage, £30 mn., and banking £25 mn. This book suggests that the City's earnings in recent years are likely to have been nearer £150 mn. than the £125 mn. given in the House of Commons. The main difference is in insurance: the book's unofficial estimate is £70 mn., an increase of £30 mn. on the official figure. It seems possible, however, that the figure of £70 mn. covers all earnings of insurance companies, including interest and dividends which in the official estimates are shown under "Interests, profits, and dividends."

The book does more than illuminate Britain's "invisibles"—only part of which are earned in the City. It provides an explanation of the growth of London as a financial center, a development based on service—and services.

£ £ £

A Guide to the Practice of Public Relations prepared by the Institute of Public Relations (Newman Neame, London, 1958, 243 pages, 30s.)

This guide to the practice of public relations, sponsored by the Institute of Public Relations, is the first survey of its kind published in Britain. The Institute of Public Relations, the only organization in Britain devoted to the study and development of public relations, was founded in 1948 by a group of public relations officers from commerce, industry and central and local government. Contributors to this survey are experienced public relations practitioners in their fields—press, television, radio, public opinion research, films. The primary aims of the survey are to introduce newcomers in the profession to the channels through which information is communicated and to show how these channels are to be used. Its discussion of the purpose and function of public relations is of special value.

As the editors say in their preface, "the securing and maintaining of a good understanding with the public are not new aims. But they are of new significance. On the one hand is an adult population with great responsbilities as citizens to whom it is a duty to pass the facts, faithfully presented, on which judgment can be exercised. On the other hand are means by which news and views can be communicated with speed and force to reading, listening and watching publics in all parts of the world. The PRO's role as this book shows is to know how and when to present the information . . . and, in this work, to hold to high standards of accuracy and fair dealing."

£ £ £

Parents, Children and Television (Published for the Independent Television Authority by HMSO, 1958, 48 pages, 3s. 6d.)

Is television a curse or a blessing? Opinions vary, but there is general agreement that television has had a greater impact on family life than any other invention—whether the cinema, radio, motor car, or telephone.

The purpose of this survey was to discover what *parents as whole* feel about television's influence on their children. The main text of the report deals with replies received from parents with both British Broadcasting Corporation and Independent Television Authority television in their homes. The differences as between homes with both BBC and ITA and those with BBC only were in general slight. But there was a continuous significance as between those homes with and those without televison: parents without television being noticeably less favorable, as might be expected, in their attitudes towards it.

The number of parents who think television is good for their children is much larger than the number who think it is bad. Approving parents believe that television improves their children's minds. Disapproving parents seem more concerned about the physical effects of television than the intellectual. No evidence was found of any widespread anxiety about the effect of scenes of violence in television.

A substantial majority of parents with television say that television has positively improved their children's social conduct. The very great majority of parents think that television programs are very good or reasonably good. But there is evidence of fairly extensive parental guidance in the selection of television programs. In short, television is regarded as a blessing not a curse. It has made family life happier and more interesting. Children stay at home more and families spend more time together. When parents were asked how they would prefer their children to spend a couple of free hours, more parents chose television than any other single activity.

One thing to remember about this book. It tells what parents think about television. It does not tell parents what they ought to think.

£ £ £

Ageing and Human Skill by A. T. Welford (Oxford University Press, 1958, 300 pages, 25s.)

Age, as most of us know, brings its problems—problems of adaptability, problems of getting useful work, problems of sickness, hobbies, companionship and interests.

Yet geriatrics is still a fairly new field of study. Up to recently, the problems of growing old and of old age were approached sentimentally. It was more or less a case of what could be done with the poor old dears when industry had no further use for them and when the family had grown up. Now, there is a more scientific approach. The social conscience is demanding that older people, now larger in number than ever before, should be able to live fruitful lives—not only for the good of themselves but for the good of the community and the country.

This book is a scientific survey of this problem. It is centered on work by the Nuffield Unit for Research into the Problems of Ageing, and is the record of the researches made to study ways in which human performance changes during middle and early old age. It contains accounts of a series of laboratory experiments and studies in industry which constitute, it is said, the most sustained research into the psychological aspects of ageing yet achieved.

The primary purpose of these researches was to obtain fundamental knowledge of the processes of ageing and to point to ways of assisting the employment and training of people in their later years.

The book is not easy reading, for its appeal is to the specialist. Its many tables and charts illustrate the researches. The concluding remarks are encouraging. In many tasks, people—young and old alike—are working well within their capacities, and changes of capacity, even in old age, are unimportant. Relatively minor modifications in layout of work or of machine tools would often enable work to be done by older people. Of greater importance, perhaps, are the attitudes of mind—of the workers and of employers. Attempts to fit the job to the man would seem a far better approach to the problem of employment for older people than attempting to move men to other jobs.

The Structure of British Industry edited by Duncan Burn (Cambridge University Press, 1958, Vol. 1, 403 pages, 45s., Vol. 2, 499 pages, 50s.)

This symposium is not exactly a bedside book. It is a survey for all who are interested in an up-to-date outline of the organization and functioning of the principal British industries. It is published under the auspices of the National Institute of Economic and Social Research.

Each chapter treats one industry, giving *inter alia* the number, size, scope and interrelations of the firms or units in the industry; relationships with overseas industries and the home government; and the degree of monopoly.

The two volumes cover industries responsible for 40 per cent of British net manufacturing income and 40 per cent of total industrial employment. They include agriculture, building, road and rail transport, and coal mining. The newer and expanding industries such as electronic, chemical, and aircraft industries are given special attention.

The separate chapters contain tables and bibliography of books, articles, periodicals, and official publications.

This first volume in the series sets a pattern for giving practical information on often obscure subjects. The oil industry chapter contains, for instance, tables giving crude oil outputs and productivities in the major oil countries; capital investment in the three major oil areas; British figures on imports, refining, and outputs; a list of oil refineries in Britain with capacity; UK conversion costs; and output per man in oil refining.

Students and businessmen should find the volumes most useful for special study of individual industries. They may also like to know that the National Institute, which is sponsoring the series, is engaged on a thorough survey of the current British economy with a view to improving the basis on which decisions, business or governmental, have to be made.

£ £ £

The Crossing of Antarctica by Sir Vivian Fuchs and Sir Edmund Hillary (Cassell, London, 1958, 338 pages, 30s.)

This is the story of the Commonwealth Trans-Antarctic Expedition of 1955-58. For those who prefer to see Antarctica at a distance and undergo privations in comfort, this is the book. Everything is made easy. The thirty colored pictures, taken by George Lowe and Jon Stephenson, reproduced here give, so we are assured by Sir Vivian, an excellent idea of the colors as they really are. Who would otherwise believe in pink mountains and purple ice? In addition, several dozen monochrome pictures show clearly what life on these expeditions is like — in the carpenter's shop, in the galley, at sea, and in the snow. Several maps and over 300 pages of text complete this story of life — month after month — on the ice.

What a life it is when crossing more than two thousand miles of unexplored snow and ice with unknown mountain ranges, ice walls, crevasses hidden by thin layers of snow, and areas of iron hard ridges like a choppy sea suddenly frozen. Then there is the "white-out" — the Antarctic equivalent of pea-soup fog. All this for exploration and scientific research in Man's endless quest for knowledge and control of Nature.

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